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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,687	08/05/2003	Hari Babu Sunkara	SO0017USNA	7564

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EXAMINER	
KEYS, ROSALYND ANN	
ART UNIT	**PAPER NUMBER**
1621	

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/634,687	SUNKARA ET AL.	
	Examiner	Art Unit	
	Rosalynd Keys	1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/1/03 & 2/2/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. Claims 1-31 are pending.

Claims 1-31 are rejected.

Information Disclosure Statement

2. The information disclosure statement filed December 1, 2003 and February 2, 2004 have been considered.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 9-14 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for obtaining PO3G having a molecular weight of about 250-2250 with an APHA color less than about 50 by contacting PO3G with about 1.0 to 5.0 wt% activated carbon, does not reasonably provide enablement for obtaining PO3G having a molecular weight of about 2251-5000 with an APHA color less than about 50 by contacting PO3G with 0.1 to about 0.5 wt% activated carbon. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. In examples 6-11 of the instant specification a color APHA of less than 50

is not obtained when 0.25 wt% of activated carbon is contacted with a PO3G having a molecular weight of 2449. In examples 13-17 of the instant specification a color APHA of less than 50 is not obtained until 1.0 wt% of activated carbon is contacted with a PO3G having a molecular weight of 2212. Thus, based upon the data obtained in Applicant's examples in order to practice the instantly claimed invention the PO3G has to have a molecular weight of less than about 2250 and use between 1.0 and 5.0 wt% activated carbon.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-7, 15, 16, 19-22, and 24-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Morris et al. (US 2,520,733).

Morris et al. teach preparing polymers of trimethylene glycol by heating glycols in the presence of dehydration catalysts (see column 2, line 30 to column 3, line 34). Following the polymerization the product is purified to remove color bodies by percolation with fuller's earth followed by hydrogenation (see column 6, line 39 to column 7, line 69). The percolation step is preferably carried out at or below room temperature (see column 7, lines 25-29). The hydrogenation step is carried out at temperature ranging from about 50°C to about 275°C (see column 7, lines 55-64). The

polymers to be purified have molecular weights ranging from about 100 to about 10,000, preferably between about 200 and 1500 (see column 10, lines 5-11). The limitations of claims 15-18 are taught in Examples X-XII (see column 15). The trimethylene glycol polymer produced in Example XII has a molecular weight of 475.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morris et al. (US 2,520,733) alone or in view of Borglin (US 2,315,584).

Morris et al. teach the invention described above.

Morris et al. fail to expressly disclose that the APHA color is less than about 50, however, since the claimed steps for removing the color bodies are fully taught by Morris et al. Morris et al inherently teach this limitation. Further, one having ordinary skill in the art would expect it to be less than 8 Gardner color, since this is the result obtained by using hydrogenation alone and in column 7, lines 37-45 Morris et al. teach that the combination of percolation with fuller's earth followed by hydrogenation is better at removing color bodies than either of these two methods alone.

Morris et al. differ from the claims in that Morris et al. teach using fuller's earth instead of activated carbon.

Borglin teach that activated carbon and fuller's earth as interchangeable for use in removing color bodies.

One having ordinary skill in the art at the time the invention was made would have found it obvious to substitute activated carbon, as taught by Borglin, for the fuller's earth in the process of Morris, since Borglin teaches that they are equivalents agents for removing color bodies.

Morris et al. further differ from the instant invention in that Morris et al. do not teach the amount of the adsorbent to utilize or the amount of time the contact should

be conducted. One having ordinary skill in the art at the time the invention was made would have found it obvious to vary the amount of activated carbon utilized and the contact time need for removal of the color bodies depending upon the application of the product PO3G (see column 7, lines 31-45).

Morris et al. do not disclose the percent color reduction of the combination of percolation and hydrogenation. However, one having ordinary skill in the art at the time the invention was made would expect the percent color reduction to be greater for the combination of percolation and hydrogenation than for the two methods singly (see Examples XI and XII). Thus the limitations of claims 19-21 are met are at least suggested.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rosalynd Keys whose telephone number is 571-272-0639. The examiner can normally be reached on M, R and F 3:30-8:30 pm and T-W 5:30-10:30 am.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rosalynd Keys
Primary Examiner
Art Unit 1621

April 30, 2004